



Greg Umanski is an American filmmaker. He is considered one of the founding pioneers of the New Hollywood era and one of the most popular directors and producers in film history.

Greg Umanski is currently considering several new movie scripts trying to select a most promising one. He eventually compiled a short list of three screenplays.

1. *The Happy Days* is a comedy script which tells the story of a young gifted screenwriter and an old and famous actor. The role of the old actor is written specifically for Sir Brian Monahan, a British film star and a comic of great renown, the Oscar winner of 1999 and 2013. If Sir Brian takes part in the project, then Umanski's studio accounting department estimates that the film will make a profit of about \$75 million. However, it is known that Sir Brian has serious health problems and a problem with alcohol. Greg estimates that there is a 20% chance that Monahan will not be able to complete the work on the project and will have to be replaced by another British, American, or maybe Canadian actor. Then, depending on who becomes a replacement actor, in the best case scenario, the film will make a profit of \$15 million; in the worst case scenario, the film would most likely be a box-office failure with the loss of \$8 million. Greg thinks that the first scenario is 70% probable and the second scenario is 30% probable.



2. The second script, *The Lynx*, is so absorbing that Umanski could not stop reading until it was



finished. Lynx was the codename of a legendary female professional assassin who operated 1998 – 2007 all over the world, but mostly in Russia, Eastern Europe, and the Middle East. She worked under many disguises, spoke many languages, but has never been caught and has never been identified. The script contains such convincing and scandalous details that Umanski suspects that the text could not been written without help of the Lynx herself. Greg is sure that a

movie based on the script in its current form (version A) will be a huge box office hit.

However, almost certainly it will be followed by a number of libel cases as too many big names are mentioned in the script in unfavourable context. Greg is sure that his company can win all the cases, but it will cost time and money, a lot of money.

Greg is also considering a version B of the script where the most scandalous episodes are deleted or rewritten. Then, he would avoid being sued but the box office figures will not be that impressive.

Then, Greg Umanski would like a Russian actress Irina Antonova to get the starring role in the film (the Lynx is believed by many to be a Russian or half-Russian). Antonova is always happy to work with Greg Umanski, but Russia-US relations at the moment are very complicated, unpredictable and keep deteriorating. The chance that Antonova will be able to accept the role is just 50%. With Antonova playing the lead role Greg counts on \$150 million profit in case of version A and \$90 million in case of version B. If Antonova has to be replaced by another actress, then Greg Umanski counts on \$70 million profit in case of version A and \$30 million in case of version B. Moreover, Greg Umanski has a subjective feeling that the movie without Antonova will not be that offensive even with the version A of the script. Based on the extensive previous experience Greg can approximately estimate the legal fees and expenses as follows: there is 60 % likelihood that the company will lose \$8 million, there is 30 % likelihood that the company will lose \$20 million, and there is 10 % likelihood that the company will lose \$50 million. However, if Antonova becomes the lead actress, the higher expenses will be unavoidable as she can be very convincing on the screen and therefore the opposite side will be more aggressive in court. Greg thinks there is 50 % likelihood that the company will lose \$10 million, there is 40 % likelihood that the company will lose \$25 million, and there is 10 % likelihood that the company will lose \$80 million. The possible legal fees are not incorporated in the presented profits as the legal problems are expected to arise after the profits have been received and should be considered separately.

**3. *The City of Yes and the City of No*** is a fantasy script. Greg Umanski failed to appreciate the phenomenon of Harry Potter movies twenty years ago and wants to avoid this mistake now. He thinks that there is 35% probability that the film can result in a huge \$150 million profit and 65% probability that that the project will be a box office flop and will just break-even.

However, in spite of his huge experience and well known perspicacity Greg Umanski is an old school director and producer. He is not quite sure that he can correctly estimate the chances of *The City of*

*Yes and the City of No*, the more so as the movie production would require application of the cutting edge methods of computer-generated imagery. Greg is thinking about



employing the famous company Klein CGI Inc. located at the intersection of Yonge St. and Wellington St. in the downtown Toronto. Klein CGI specialists will provide either favourable report predicting a huge success, or unfavourable report predicting a relative failure. It is known that there is 90% chance that Klein CGI Inc. provides favourable report given positive outcome. There is also 80% chance that Klein CGI Inc. provides unfavourable report given negative outcome. The company can perform a complete and detailed analysis and would require, all in all, a \$1.5 million fee.

Due to the recent financial difficulties the Greg Umanski Studio is able to undertake only one project, focusing on either *The Happy Days*, or *The Lynx*, or *The City of Yes and the City of No*.

Please perform an analysis of the problem facing the Greg Umanski Studio, and prepare a report that summarizes your findings and recommendations. Include the following items in your report:

1. A (simple) decision tree that shows the logical sequence of the decision problem given the Klein CGI research information is not available.
2. A recommendation regarding what project Greg Umanski should choose if the Klein CGI Inc. analysis is not available.
3. A decision strategy that Greg Umanski should follow if the research is conducted based on the posterior probabilities and a revised decision tree.
4. A recommendation as to whether Greg Umanski should employ Klein CGI Inc., along with the detailed decision policy, the value of the information provided by the research firm (find both EVPI and EVSI) and the efficiency of this information.

Use Excel TreePlan to construct both decision trees. Include the details of your analysis as well as the TreePlan output as an appendix to your report.

